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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/842,363	04/25/2001	Ahmad Ansari	7780/13 (T00341)	6562

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One AT&T Way,
Room 2A-207
Bedminster, NJ 07921

EXAMINER	
RAMAN, USHA	

ART UNIT	PAPER NUMBER
2424	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/842,363	ANSARI ET AL.	
	Examiner	Art Unit	
	USHA RAMAN	2424	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 April 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,7-10 and 21-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,7-10 and 21-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Response to Arguments

1. Applicant's arguments filed April 23, 2010 have been fully considered but they are not persuasive.

Applicant argues (see Remarks, page 8) that, "Chadda sends video portions without regard to selecting combinations of video portions of varying quality based on available bandwidth". Examiner respectfully disagrees. In particular Chadda (see col. 11, lines 31-40) discloses as many video portions as a recipient's bandwidth allows. Applicant further argues (see Remarks, page 8) that, "Gemmel teaches a client based decision on downloading a quality level of video based on available bandwidth, rather than a server level decision based on assigned band width and quality of service assigned to the subscriber terminal". However, as explained above, Chadda teaches such a decision of server level, thereby obviating applicant's arguments.

For these reasons stated above, the rejection is maintained.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 7 recites the limitation, "wherein the low-quality video portion further comprises lower spatial frequency sub-bands *and the other than the other video*

portions". The limitation is best understood as "lower spatial frequency sub-bands other than the other video portions".

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1, 3-4, 6-13, 15-17, and 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gemmell (US PG Pub. 2002/0116473) in view of Tillman et al. US Pat. (6,496,980), Payton (US Pat. 5,790,935) and Chadda (US Pat. 6,392,705).

With regards to claims 1, 21, and 25 Gemmell discloses a method of downloading a video content representing a program to a subscriber terminal comprising:

Decomposing at a server, video content into a plurality of video quality portions [0006]: a low quality video portion of the plurality video quality portions comprising a complete copy of the program at a video lower than at least one of the plurality of video quality portions [0006], [0015];

Downloading from a server, a complete copy of the low quality video portion to the subscriber terminal ([0044] "single client request results in data streams of the requested layer begin transmitted in their entirety from the server") over a network [0033] for storage locally at the subscriber terminal (208), [0042];

Receiving from the subscriber terminal a selection request for the program corresponding to the video content after downloading the complete copy of the low quality video portion ([0042] “during the user directed second play back…”)

Downloading at least one of the plurality of video quality portions having a video quality higher than a low quality video portion to the subscriber terminal over the network in response to the selection request ([0042] “during a user-directed second playback, layer 2 is streamed, stored…”). In the preceding example, the streaming layer 2 during user-directed second playback reads on the “real time” downloading of the at least one of the plurality of video quality portions (i.e. second layer) having a video quality higher than the low quality video portion.

Gemmell discloses the client computer is coupled over a network (such as LAN, WAN, etc.) to the server [0033], [0034]. Gemmell additionally discloses that the transmission of layers separately is particularly advantageous in bandwidth limitations based on network capacity/types [0004]. Gemmell is however silent on downloading the plurality of quality portions via a digital subscriber line. Gemmell further discloses a method of "pre-fetching” certain layers so that it can be available “on-hand” in the client’s memory for quick presentation (Gemmell: [0048], [0051]). Gemmell only discloses pre-fetching within the context of second and subsequent layers and silent on pre-fetching the first portion of the video during off peak hours.

While Gemmell is silent on decomposing video content using one of a sub-band or a vector quantization compression techniques, Chadda is evidence that it was well known in the art at the time of the invention to use wavelet and sub-band

decomposition techniques (col. 8, lines 48-52). Chadda additionally the step of transmitting as many video quality portions as a recipient's bandwidth allows. Accordingly Chadda teaches a plurality of combinations of the video quality portions customized for delivery for a plurality of recipient bandwidths.

In an analogous art, Tillman is evidence that digital subscriber lines were well known in the art of time for network connection and further evidence for downloading plurality of quality portions over a bandwidth constrained network such as the digital subscriber line (see column 3 lines 58-64), wherein examiner takes official notice that asymmetric DSL was notoriously well known at time of the invention.

In a further related art, Payton discloses a method of predicting items a subscriber might like based on user preferences and downloading such items to the subscriber terminal during off peak hours (see abstract).

It would have been obvious to one of ordinary skill in the art to advantageously incorporate the teachings Chadda into the system of Gemmell by decomposing the video into a plurality of quality portions using a wavelet or sub-band technique thereby utilizing an optimal compression technique and further transmitting as many combination of video quality portions as a recipient's bandwidth allows, allowing the user to download additional layers later if desired, and further incorporate the teachings of Payton by predicting what a user likes, and downloading the low quality portion of the predicted items to the user's terminal during off peak times so that the predicted items can be available "on hand" for immediate playback, wherein the user can examine the video and determine if a

higher quality for the video is desired. Additionally, one skilled in the art could have easily combined the methods of transmitting the various quality portions via a digital subscriber line connection, as taught by Tillman with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

With further regards to claim 25, Gemmell additionally discloses a computer-readable storage medium comprising a set of instructions for performing the above method [0027].

With regards to claim 7, the modified system further comprises, wherein each video quality portions represents a different level of service quality (Gemmell: [0018]. [0053]-[0057], Chadda: col. 6, lines 55-67, col. 11, lines 46-50). Furthermore the modified system discloses utilizing sub-band decomposition (col. 8 lines 48-52), wherein it is noted that such a decomposition decomposes the signals into a plurality of different frequency bands. Accordingly when utilizing sub-band decomposition, the low quality video comprises lower spatial frequency sub-bands than the other video poritions.

With regards to claims 8, 23 and 24, the modified system further comprises the step of determining ADSL download bandwidth available to subscriber terminal (Gemmell: [0035], Chadda: col. 11, lines 34-36) and selecting at least one of the plurality of video quality portions having a quality higher than the low quality portion based on the download bandwidth to generate a combination of the lower quality and other video portions, wherein each combination has a video quality level

selected for the bandwidth available to the subscriber (Chadda: col. 4, lines 13-18, col. 11, lines 36-40, Gemmell: [0035]).

With regards to claims 9, and 22, the modified system discloses a hierarchical layer wherein each enhancement layer enhances the lower layers but do not repeat the data from the lower layers (Gemmell: [0006]). This reads on the claimed pyramidal scheme.

With regards to claim 10, the modified system further discloses the method of recomposing a plurality of downloaded video quality portions representing at the subscriber terminal for presenting the content to a user (Gemmell: [0012],[0040]).

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to USHA RAMAN whose telephone number is (571)272-7380. The examiner can normally be reached on Mon-Fri: 8am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Kelley can be reached on (571) 272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Christopher Kelley/
Supervisory Patent Examiner, Art Unit 2424

/Usha Raman/